Endoscopic Snapshot

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Endoscopic Vacuum Therapy for Esophageal Perforation Treatment after Foreign Body Ingestion: Resolution after a Single Session

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Keywords
Esophageal perforation · Foreign body · Endoscopic vacuum therapy

Terapêutica endoscópica de vácuo para perfuração esofágica após ingestão de corpo estranho: resolução após uma única sessão

Palavras Chave
Perfuração esofágica · Corpo estranho · Terapêutica endoscópica de vácuo

A 70-year-old man was admitted to the Emergency Department due to chest pain after foreign body ingestion (chicken bone) 5 days before. He mentioned having fever but denied other symptoms. Chest computed tomography (CT) scan revealed in the thoracic esophagus, in the same plane as the left atrium, a linear and dense object 30 mm in size, with signs of esophageal perforation and presence of an adjacent collection (23 × 31 × 61 mm) (Fig. 1). Following multidisciplinary discussion, it was decided to remove the foreign body and close the esophageal defect endoscopically. Upper endoscopy was performed (online suppl. Video; see www.karger.com/doi/10.1159/000503011) and confirmed the presence of a bone penetrating the esophageal wall, 32 cm from the incisors (Fig. 2). The surrounding mucosa was congestive, and purulent drainage was noticed. The foreign body was removed using an alligator jaw grasping forceps, and a 5-mm esophageal wall defect was observed (Fig. 3). We decided to perform endoscopic vacuum therapy (EVT) to try to close the defect and simultaneously treat the collection. The sponge (Endo-Sponge system, B. Braun, Melsungen, Germany) was placed in the esophageal lumen after appropriate positioning of the overtube (Fig. 4). After the procedure, the patient was admitted on total parenteral nutrition, antibiotics, and an antifungal. Five days later, upper endoscopy was repeated with sponge removal. Granulation tissue was observed at the location of the wall defect, with apparent resolution of the perforation (Fig. 5). CT was repeated showing no oral contrast leakage and significant improvement of the collection dimensions (27 × 17 mm). The patient resumed oral feeding 2 days after sponge removal, completed a 10-day antibiotic course, and was discharged. He remains well 9 months after the procedure, with no esophageal symptoms.

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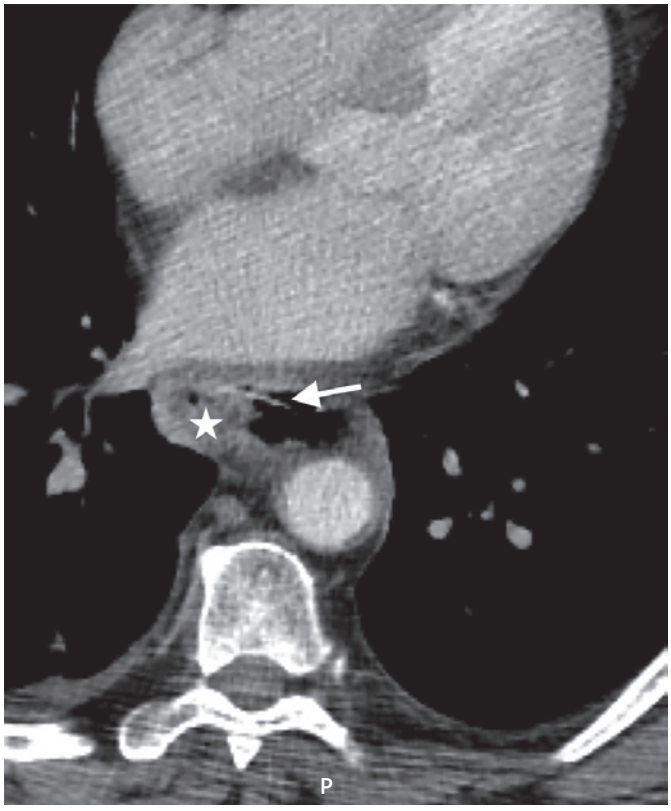

Fig. 1. Axial view of chest CT scan revealing in the thoracic esophagus, in the same plane as the left atrium, a linear and dense object 30 mm in size (arrow), with signs of esophageal perforation and presence of an adjacent collection (23 × 31 × 61 mm) (star).

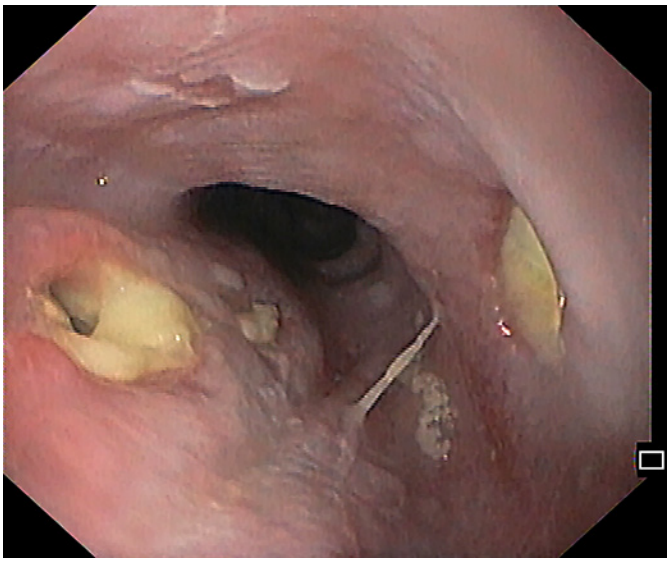

Fig. 3. Esophageal perforation was observed after foreign body removal.

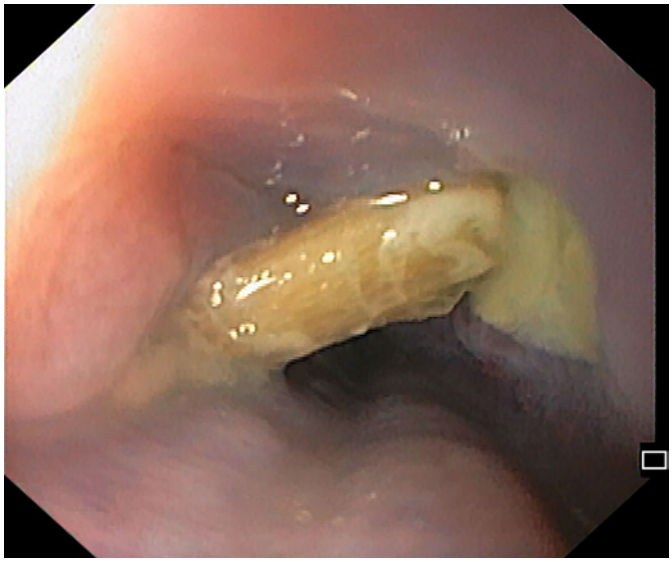

Fig. 2. Upper endoscopy confirming the presence of a bone penetrating the esophageal wall.

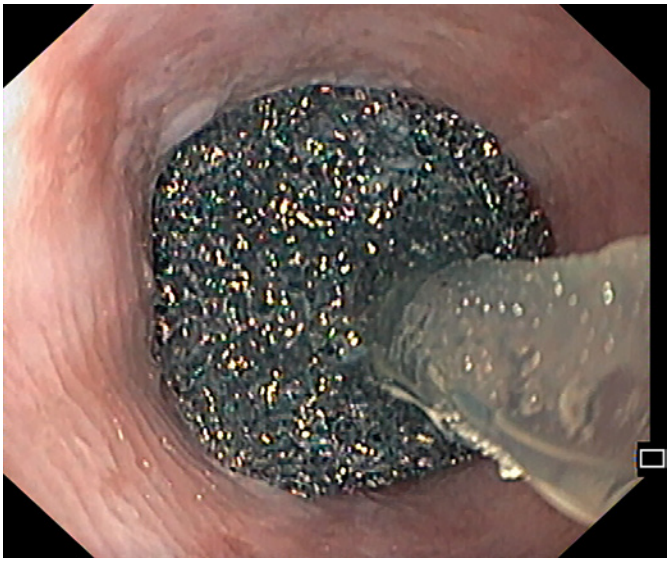

Fig. 4. Endoscopic vacuum therapy was performed, with sponge placement in the esophageal lumen.

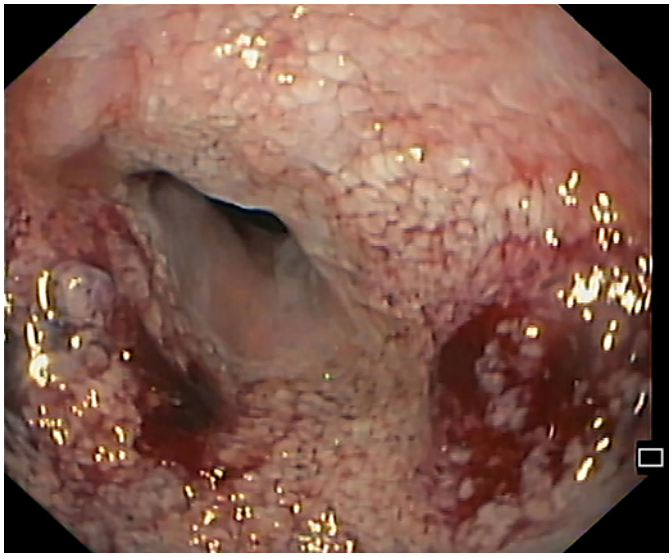

Fig. 5. Complete closure of the esophageal perforation was achieved after 1 session of endoscopic vacuum therapy.

Esophageal perforations are rare, with an incidence of 3.1 per 1,000,000 per year [1] but are associated with high morbidity and mortality [2, 3]. Although surgery has traditionally been the gold standard care for patients with esophageal perforation, endoscopy is now emerging as the primary treatment modality of this condition [4]. Endoscopic closure of esophageal transmural defects can be achieved using a variety of modalities, including through-the-scope clips, over-the-scope clips, stents, or endoscopic suturing; however, additional percutaneous/surgical drainage of collections is often required [5]. EVT is an alternative approach for the endoscopic treatment of esophageal perforations, allowing simultaneous closure of the defect and drainage of a collection [6, 7]. Previous studies have evaluated the role of EVT in the treatment of esophageal perforations, with a reported successful closure of the defect between 70 and 100%, with an average of 5 sponge exchanges (range 0–39) [8–11]. In this case, only 1 EVT session was necessary, with no need for sponge replacement, highlighting the efficacy of this technique for treating esophageal wall defects with associated collections.

Statement of Ethics

The authors have no ethical conflicts to disclose.

Disclosure Statement

The authors have no conflicts of interest to declare.

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